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PATENT
Attorney Docket No. ZON-003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): Roman Chistyakov
SERIAL NO.: 10/065,739 GROUP NO.: 1753
FILING DATE: November 14, 2002 EXAMINER: Rodney Glenn McDonald
TITLE: HIGH DEPOSITION RATE SPUTTERING

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. BOX 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. §1.97, Applicants hereby make of record the references listed on the accompanying Form PTO-1449 for consideration by the Examiner in connection with the examination of the above-identified patent application. Copies of the references are enclosed.

REMARKS

In accordance with the provisions of 37 C.F.R. §1.97, this statement is being filed (CHECK ONE):

- ☒ (1) within three (3) months of the **Filing Date** or before the mailing date of the **First Office Action** on the merits; or
- ☐ (2) after the period defined in (1) but before the mailing date of a **Final Rejection** or **Notice of Allowance**, and
- ☐ the requisite Statement is below, **OR**
- ☐ the requisite fee under Rule 1.17(p), namely **\$180.00**, is included herein, or
- ☐ (3) after the mailing date of a **Final Rejection** or **Notice of Allowance** but before the payment of the **Issue Fee**, **AND**
- ☐ Applicant hereby Petitions the Commissioner to accept and consider the attached Information Disclosure Statement, **AND**
- ☐ the requisite Statement is below, **AND**
- ☐ the requisite petition fee due under Rule 1.17(i)(I), namely **\$130.00** is included herein.

It is respectfully requested that each of the references shown on the attached Form PTO-1449 be made of record in this application.

STATEMENT

As required under §1.97(e), Applicants, through the undersigned, hereby state either that [check the appropriate space]:

- ☐ 1. [E]ach item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application **not more than** three months prior to the filing date of the Information Disclosure Statement; or
- ☐ 2. [N]o item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and to the knowledge of the person signing this Statement after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to **any** individual designated in §1.56(c) **more than** three months prior to the filing of the Information Disclosure Statement.

FEE AUTHORIZATION

Should any fee associated with the submission of this paper not be attached hereto as a check, the Commissioner is authorized to charge the missing fee to our Deposit Account, No. 501211. Any overpayments should be credited to said Deposit Account.

Date: July 2, 2003
Reg. No. 40,137

Tel. No.: (781) 271-1503
Fax No.: (781) 271-1527

Respectfully submitted,



Kurt Rauschenbach
Atty/Agent for Applicant(s)
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Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/065,739
		Filing Date	11/14/2002
		First Named Inventor	Chistyakov
		Group Art Unit	1753
		Examiner Name	McDonald
		Attorney Docket Number	ZON-003
Sheet	2	of	3

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C1	BOOTH, ET AL., The Transition From Symmetric To Asymmetric Discharges In Pulsed 13.56 MHz Capacity Coupled Plasmas, J. Appl. Phys., July 15, 1997, Pgs. 552-560, Vol. 82 (2), American Institute of Physics.	
	C2	BUNSHAH, ET AL., Deposition Technologies For Films And Coatings, Materials Science Series, Pgs. 176-183, Noyes Publications, Park Ridge, New Jersey.	
	C3	DAUGHERTY, ET AL., Attachment-Dominated Electron-Beam-Ionized Discharges, Applied Science Letters, May 15, 1976, Vol. 28, No. 10, American Institute of Physics.	
	C4	GOTO, ET AL., Dual Excitation Reactive Ion Etcher for Low Energy Plasma Processing, J. Vac. Sci. Technol. A, Sept./Oct. 1992, Pgs. 3048-3054, Vol. 10, No. 5, American Vacuum Society.	
	C5	KOUZNETSOV, ET AL., A Novel Pulsed Magnetron Sputter Technique Utilizing Very High Target Power Densities, Surface & Coatings Technology, Pgs. 290-293, Elsevier Sciences S.A.	
	C6	LINDQUIST, ET AL., High Selectivity Plasma Etching Of Silicon Dioxide With A Dual Frequency-27/2-MHz Capacitive RF-Discharge.	
	C7	MACAK, Reactive Sputter Deposition Process of Al ₂ O ₃ and Characterization Of A Novel High Plasma Density Pulsed Magnetron Discharge, Linkoping Studies In Science And Technology, 1999, Pgs. 1-2, Sweden.	
	C8	MACAK, ET AL., Ionized Sputter Deposition Using An Extremely High Plasma Density Pulsed Magnetron Discharge, J. Vac. Sci. Technol. A, July/August 2000, Pgs. 1533-37, Vol. 18, No. 4, American Vacuum Society.	

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

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		Group Art Unit	1753
		Examiner Name	McDonald
Attorney Docket Number	ZON-003		
Sheet	3	of	3

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C9	MOZGRIN, ET AL., High-Current Low-Pressure Quasi -Stationary Discharge In A Magnetic Field: Experimental Research, Plasma Physics Reports, 1995, Pgs. 400-409, Vol. 21, No. 5, Mozgrin, Feitsov, Khodachenko.	
	C10	ROSSNAGEL, ET AL., Induced Drift Currents In Circular Planar Magnetrons, J. Vac. Sci. Technol. A., January/February 1987, Pgs. 88-91, Vol. 5, No. 1, American Vacuum Society.	
	C11	SHERIDAN, ET AL., Electron Velocity Distribution Functions In A Sputtering Magnetron Discharge For The EXB Direction, J. Vac. Sci. Technol. A., July/August 1998, Pgs. 2173-2176, Vol. 16, No. 4, American Vacuum Society.	
	C12	STEINBRUCHEL, A Simple Formula For Low-Energy Sputtering Yields, Applied Physics A., 1985, Pgs. 37-42, Vol. 36, Springer-Verlag.	

Examiner Signature		Date Considered	
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